DOCUMENT RESUME

ED 372 518 EC 303 150

AUTHOR Dais, Teresa; And Others
TITLE Selected Readings in Transition: Cultural Differences, Chronic Illness, and Job Matching. Volume 2.
INSTITUTION Illinois Univ., Champaign. Transition Research Inst.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE 93
CONTRACT H158T-00001
NOTE 81p.; For volume 1, see ED 349 728. For individual papers, see EC 303 151-154.
PUB TYPE Collected Works - General (020)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Chronic Illness; Cultural Background; *Cultural Differences; *Disabilities; *Education Work Relationship; Ethnic Groups; Federal Legislation; Job Placement; Mexican Americans; Performance Tests; Secondary Education; Severe Disabilities; Student Evaluation; *Supported Employment; *Transitional Programs; Vocational Evaluation
IDENTIFIERS *Performance Based Evaluation

ABSTRACT

This collection of four papers examines various aspects of the transition from school to adulthood and employment for individuals with disabilities. The first paper, "An Analysis of Transition Assessment Practices: Do They Recognize Cultural Differences?" (Teresa A. Dais), discusses the need for assessment practices to meet the needs of culturally and ethnically diverse students and describes authentic or performance-based assessments. "Culture-Specific Variables That May Affect Employment Outcomes for Mexican-American Youth with Disabilities" (Nancy Meier-Kronick) addresses such issues as the parental/family network, cultural view of disability, religious influences, acculturation levels, language issues, education and employment relationships, substance abuse, folk illnesses, and specific cultural concepts such as "machismo" and "familism." Research on employment outcomes for Latino youths with disabilities are reviewed. "Moving Out into the World: Transitions from Adolescence to Adulthood for Students with Chronic Illness and Other Disabilities" (Pamela Luft and Frank R. Rusch) reviews transition-related legislation and uses two student and family scenarios to illustrate the transition process from a social systems perspective. "Job Matching in Supported Employment: Variables Related to Transitional Planning for Students with Moderate and Severe Disabilities" (Stephen S. Rubin) emphasizes the importance of evaluating individual strengths and weaknesses as part of the job placement process. (Each paper contains references.) (JDD)

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Selected Readings in Transition: Cultural Differences, Chronic Illness, and Job Matching

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Selected Readings in Transition:

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Acknowledgments

The authors wish to thank Susan Fowler for her assistance, Kirsten McBride for her insightful editorial contributions, and Frank Rusch for his support and encouragement in preparation of this monograph.

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Introduction

The first article, "An Analysis of Transition Assessment Practices: Do They Recognize Cultural Differences?" Dais examines current assessment practices with specific reference to transition. With the growing cultural and ethnic diversity across the United States, traditional assessment practices need to be ameliorated to meet the needs of all students. Thus, they fail to recognize cultural, linguistic, socioeconomic, and disability differences, thereby generating bias in prediction, decision-making and inferences against minorities and students with disabilities.

Although normed on the dominant American mainstream culture such assessment practices are used to determine eligibility for services and predict employment outcomes for minorities and students with disabilities. In order to eliminate bias in testing, culture-fair and culture-specific assessment practices must be identified or developed.

Fortunately, alternatives to standardized assessments are attracting widespread attention. Supporters of this movement maintain that authentic or performance-based assessment practices measure individual strengths and weaknesses, and thus represent legitimate measures of ability, performance, and skill. Alternative assessments may be costly and are often time-consuming. In addition, they must have the endorsement of professional educators to succeed.

In the second article "Culture-Specific Variables that May Affect Employment Outcomes for Mexican-American Youth with Disabilities," Meier-Kronick focuses on cross-cultural transition. Especially in the last decade, we have witnessed an increased awareness and emphasis on multi-cultural issues. Yet, few studies have researched the transition of secondary-school age ethnic minority youth into postsecondary education and/or the world of work.

Cross-cultural transition as a topic includes not only youth with disabilities from ethnic minorities, but also non-disabled youth from these groups. Although it is important not to subscribe to the defeatist notion that one's culture is to blame for lack of

academic or economic success, it is a widely held belief that culture often plays an important role in these areas. Furthermore, research has shown that youth from ethnic minorities often have difficulty achieving both academic and job success. For example, these youth demonstrate higher drop-out rates and lower academic levels in high school overall than white students. Typically, they do not go on to college in proportionate numbers, and when they do, they often have continued academic problems and disproportionate drop-out rates. Finally, youth from these groups who in addition have a physical, developmental, learning, psychological, or behavioral disability are even further at risk.

In "Moving out into the World: Transition from Adolescence to Adulthood for Students with Chronic Illness and Other Disabilities," Luft examines transition-related legislation for service delivery to persons with special needs. Within the past two decades rights and opportunities for all citizens in this country have undergone tremendous change. Specifically, the Supreme Court decision of Brown vs. Board of Education of Topeka, Kansas, in 1954 began a new era of civil rights reflected in Justice Earl Warren's statement that, "separate is inherently unequal." Further, the suit in 1972 by the Pennsylvania Association of Retarded Citizens vs. the Commonwealth of Pennsylvania specifically addressed the needs of children with disabilities, ruling that children with mental retardation have the right to a free and appropriate public education. These rulings have subsequently formed the basis for a recent series of laws addressing major governmental institutions, including education, rehabilitation, and social security, and the rights of persons with disabilities to make their own lifestyle and career choices.

Implementation of these laws and interpretation to individual service delivery require collaboration between agencies and significant individuals in the life of the person with disabilities. One way to assist implementation involves using a social systems perspective, which examines the levels that impact upon an individual and, in a

reciprocal fashion, upon which the individual has impact. This allows a variety of settings and situations to be addressed in order to more adequately prepare students with disabilities to become fully participating adults.

Finally, in "Job Matching in Supported Employment: Variables Related to Transitional Planning for Students with Moderate and Severe Disabilities," Rubin examines the concept of job matching as part of the placement process. As an assessment tool, job matching evaluates the strengths and weaknesses of an individual's repertoire. This process allows employment specialists to compare student information with job requirements. The authors emphasize that serious issues need to be addressed regarding students with disabilities and minorities. Assessment practices must reflect adequate transition-related decisions, predictions, and inferences while being sensitive to culture-specific variables. Finally, by agencies, service providers, clients, and others working cooperatively, students with disabilities will become empowered to improve the quality of their lives in an accepting and supportive community.

An Analysis of Transition Assessment Practices: Do They Recognize Cultural Differences?

Teresa A. Dais

University of Illinois

Running head: ASSESSMENT PRACTICES

Abstract

For many students, current assessment practices do not reflect achievement or competency, thus raising questions of fairness in testing. This paper reviews specific assessment practices to determine their relevance to transition and the extent to which they consider cultural differences. Assessment practices that are prediction-oriented are based on norm groups that do not adequately represent cultural, linguistic, socioeconomic, and disability differences. As a result, minorities and students with disabilities are being socially and economically repressed. In contrast, assessment practices that describe true abilities and competencies may ultimately improve students' transition from school to post-school activities.

An Analysis of Transition Assessment Practices: Do They Recognize Cultural Differences?

As the population of the United States becomes more culturally pluralistic, it is particularly important to identify assessment practices that are sensitive to all cultures and disabilities, particularly as assessment is typically the first stage toward identifying someone as eligible for services. Typically, standardized assessment instruments are normed on the dominant American mainstream culture to predict performance (Witt, Elliot, Gresham, & Kramer, 1988). As a result, they contain components that are biased against minorities and students with disabilities (Cline, 1992) by failing to differentiate cultural, linguistic, socioeconomic, and disability differences (Cummins, 1989). Indeed, some test reviewers are no longer recommending many of these tests (Hammill, Brown, & Bryant, 1992).

Fortunately, some instruments are sufficiently reliable to measure students with disabilities (Heward & Orlansky, 1992). Such instruments are characterized by national norm samples that represent comparative populations (Salvia & Ysseldyke, 1988). Although PL 94-142 mandated multifactored assessment standards, its provisions do not safeguard students with disabilities against assessment biases. Instead, this legislation, which relies on the results of traditional standardized assessment instruments, has led to labelling and justification of placement outside the regular school program for many students at an alarming rate over the past 15 years (Ysseldyke, Algozzine, & Thurlow, 1992).

Bias-free assessment has specific relevance to transition. With increasing numbers of culturally diverse students with disabilities being recognized within the educational system, appropriate assessment practices are necessary to guarantee effective transition to post-school activities (Walker, 1987). Specifically, transition assessment practices are needed that recognize cultural and disability differences. Unfortunately, many currently used transition assessment instruments are biased, thereby generating errors in

prediction, decision-making, and inferences regarding students with disabilities (Rusch, Rose, & Greenwood, 1988).

Many researchers have called for alternative assessment measures. For example, authentic, or performance-based, assessment practices must be recognized as alternative measures of student knowledge, ability, or skills and as identifiers of individual strengths and weaknesses (Medina & Neill, 1990).

Assessment practices that are sensitive to norming must be identified or developed if bias against minorities and students with disabilities is to be reduced. Norming that includes diverse populations are more likely to produce favorable results for minorities and students with disabilities in post-school activities.

The purpose of this review is to analyze traditional standardized assessment practices and determine if they recognize cultural, linguistic, socioeconomic, and disability differences. Further, this analysis will determine the extent these assessment practices are being used in transition for decision-making and predicting post-school outcomes.

Historical Overview of Testing

Psychological testing or assessment began in the United States prior to the nineteenth century as an attempt "to eliminate the traditional European use of heredity or lineage as a criterion for achievement and to identify a method that would be based upon more objective standards" (Wyatt, 1982, p. 120). Ford, Harris and Winborne (1989-1990) disagree with this view, suggesting that standardized tests were designed to divert the early desegregation movement involving minorities, thereby maintaining the social and economic repression of African- Americans (Gomez, Graue, & Bloch, 1991).

Historically, minorities, particularly African-Americans, were perceived as intellectually inferior to Anglo Americans based on brain dimensions (Gould, 1981). Similarly, Jencks (1972) claimed that intelligence was based on a genetic or biological

framework. Such perceptions legitimized the poor performances of African-American students on IQ and achievement tests.

For Anglo Americans, past injustices against African- Americans has led to an elevated status, prestige, and economic rewards and opportunities (Ford et al., 1989-1990). In fact, standardized assessments have perpetuated the disproportionate representation of this culture in advanced and higher education. Ethnic inequality continues to persist against African-Americans and other minority cultures limiting educational and occupational opportunities.

Although the American achievement ideology credits education as the key to success, prosperity, and dreams for **all** students, in reality, education remains biased in favor of Anglo Americans (Ford, 1992). Currently and throughout history, minorities and low socioeconomic students have been more likely to be tested and referred to or placed in special education programs. Further, minority students are **disproportionately** referred to special education programs when their socioeconomic status is substantially lower than the norm of the community (Walker, 1987).

Many African-American students, for example, experience environmental stress such as racism and discrimination along with poverty (Ford et al., 1989-1990). Claiming that discrimination, either intentional or inadvertent, still exists in America, Rhodes (1992) proposed that special endeavors must be made to guarantee that African-American students receive the opportunity to attain to their utmost potential.

Minority groups, especially African-Americans, are dissuaded both directly and indirectly from attaining a fair and equal education. For example, placement in special education continues to be the primary focus of standardized assessment, contributing to less challenging curricula, limited thinking, and segregation. With these educational limitations, many frustrated minority students feel forced to exit the system. Such exclusionary practices narrow students' abilities, knowledge, and skills compounding

past inequities associated with testing. As a result, minority students are visibly underrepresented in high-status positions and higher education.

Tompkins and Mehring (1989) questioned the appropriateness of a given test instrument to measure the academic proficiency or competency of culturally diverse students. At present, there is a lack of "standard conventions for judging the adequacy of a test's content validity" (Crocker, Miller, & Franks, 1989, p. 193). Normally, test items can only be proven biased by statistical analysis (Hilton, 1991). Trying to validate the presence of linguistic and cultural bias is difficult due to the invisible quality of many central aspects of culture (Harry, 1992; McLoughlin & Lewis, 1986). According to Wyatt (1982), standardized assessments frequently "combine all minority students in one group category, entitled 'nonwhite children', without regard to experiential, cultural, language, or dialect differences" (p. 123).

In fact, standardized assessments are highly ethnocentric, ignoring and overlooking the knowledge valued by many cultures (Alexander & Parsons, 1991). Additionally, standardized assessments are developed, published, and benefitted from by Anglo Americans yet used to assess and predict performances on minority cultures (Witt et al., 1988; Zeidner, 1986). In order to avoid bias in testing, McLoughlin and Lewis (1986) argued the need for culture-fair and culture-specific measures, as well as separate norms for minority groups. In contrast, other researchers have suggested that ethnic differences are a product of "mental maturity" and, therefore, not artifacts of bias in testing (Rotatori, Fox, Sexton, & Miller, 1990).

Haney and Madaus (1989) maintained that standardized assessments give false information about the status of learning by focusing on simple skills as opposed to high-order thinking. Alexander and Parsons (1991), in turn, contended that standardized assessments constitute a form of quality control that exhibits discriminatory mechanisms used to circumvent social discrimination (Stake, Bettridge, Metzer, & Switzer, 1987).

That is, the dominant American mainstream culture maintains assessment advantages over minority cultures.

On a broad scale, Medina and Neill (1990) maintained that standardized assessments shift authority into an unregulated testing industry that undermines school improvement such as focusing on basic skills, not high order thinking or creativity. In reality, standardized assessments purposely exclude minorities, thereby contributing to nonproductive, socially maladjusted, and highly stigmatized members of society.

Standardized assessments are also used to determine the eligibility of services and predict the performance of students with mental retardation and other disabilities (Menchetti, Rusch & Owens, 1983; Ysseldyke et al., 1992). Specifically, in transition, standardized assessments are predominantly used as decision-making devices and predictors of post-school outcomes. The lack of adequate norming for students with disabilities reflects the injustices and educational inequities minorities have experienced for centuries.

In determining and maintaining the educational rights of students with disabilities as well as minorities, assessments must refrain from obstructing opportunities due to inadequate and unjust standardized practices. Willingham (1989) suggested eight comparability marks that should be used when assessing students with disabilities. These include comparable item functioning, comparable reliability, comparable predicted performance, comparable admissions decisions, comparable test content, comparable testing accommodations, and comparable test timing.

Standardized assessments are biased and ethnicity, low socioeconomic status, and having a disability contribute to the inaccuracy with which these assessments predict. Additionally, standardized assessments are normed on groups with different characteristics from those with whom the assessment is intended, thereby generating errors in decision-making and prediction for minorities and students with disabilities. Assessment results provide answers to significant behavioral, physical, or academic

problems that are being proposed, but the results can sometimes transform the problems; it is imperative, therefore, that assessment information be used wisely, equally, and fairly.

Traditional Standardized Assessments

Standardized assessments are characterized by several researchers as being objective, normatively fair, and exhibiting reliable and valid outcomes (Borg & Gall, 1989). Such tests measure individuals and groups on knowledge, intelligence, personality, skill, or aptitude as well as label, classify and evaluate (Gay, 1987).

Typically, three types of standardized assessments are used in education: norm-referenced, minimum-competency, and criterion-referenced tests (Borg & Gall, 1989). These will be examined below.

Norm-referenced assessments. These assessments are designed to compare a student's performance with that of other students of the same age (Gay, 1987). Advocates of this type of assessment argue that it furnishes knowledge that is useful for ability and instructional grouping. Nonsupporters, however, maintain that curriculum-based instruction and monitoring are stronger predictors of achievement for future instruction (Ysseldyke et al., 1992). Examples of norm-referenced assessments include intelligence, academic achievement, language and speech, perceptual motor, adaptive behavior, affective and behavioral measures, and interest or vocational aptitude tests (Rusch et al., 1988).

A major concern with norm-referenced assessment is that the proper percentage of minorities have not always been represented in the norming process (Medina & Neill, 1990). Thus, although these assessments work well with those populations on which they have been standardized, they are less efficient with other populations including ethnic-minority populations and students with disabilities (Tompkins & Mehring, 1989). Additionally, the assessment content does not adequately reflect actual classroom content. Further, assessments of achievement fail to recognize the standard

developmental differences that exist among cultures. For example, the Wechsler Intelligence Scale for Children-Revised (WISC-R) has remained basically unaltered since it was first published in 1949 (Medina & Neill, 1990).

Minimum-competency tests (MCT). These assessments are designed to determine whether students meet a particular minimal standard prior to continuing with their education (Madsen, 1991). Students with disabilities are not included in the development of MCT norms or the "items and indices of reliability and validity" (DeStefano & Metzer, 1991, p. 286). Further, although programs for students with disabilities frequently focus less on academic than nonacademic subjects, these students are expected to achieve the educational level necessary to pass the MCT (Samuels, 1987). However, some states make allowances for students with disabilities by offering extended time for taking the tests and variations in test administration. In reality, students with disabilities often perform poorly on the MCT and many receive certificates of completion instead of diplomas after failing to meet the requirements to pass.

For minorities, as for students with disabilities, the failure rate on MCT is much higher than for Anglo American students, indicating that "prior discrimination, inadequate teaching, poor education, and other social and economic factors" (p. 98) may be contributing factors (Herring, 1989). Comparing the MCT reading and math scores of Anglo American, Native American, and African-American students in southeastern North Carolina, Herring (1989) found that both ethnicity and sex influenced the scores. Specifically, the Anglo American group scored significantly higher than either Native Americans or African-Americans on math and reading. No significant difference was found between Native Americans and African-Americans on math scores; however, Native Americans scored significantly higher than African-Americans on reading.

Madsen (1991) saw minimum-competency tests as being used purposely to discriminate against African-American students. Similarly, according to Medina and

Neill (1990), the lower test scores of racial and ethnic minorities reflect and compound the bias that exists in the educational system in America.

Criterion-referenced assessments. The third type of standardized assessment, criterion-referenced, is reflected in current trends in education. Assessing individual student competencies on specific tasks contrasts with norm-referenced assessments that tend to generate biases against minorities and students with disabilities by comparing individual performances with other students' performances. Salvia and Ysseldyke (1988) identified five terms in current use that originated in criterion-referenced assessments:

1. **curriculum-based assessment** determines the instructional needs of students based on their performance;
2. **objective-referenced assessment** is referenced to specific instructional objectives rather than the performance of a norm group;
3. **direct and frequent measurement** focuses on direct and frequent assessment of specific skills;
4. **direct assessment** evaluates pupil progress through the curriculum; and
5. **formative evaluation** is an ongoingassessmentactivity designed to monitor or keep track of pupil progress.

Criterion-referenced assessments measure student performance against specified objectives to be mastered in the basic skill area and the degree of content mastery expected (Rotatori et al., 1990). Such assessments are useful for program planning and monitoring student progress by providing a basis for determining what students can do and what skills and information they need to acquire (Rusch et al., 1988). Some examples of criterion-referenced assessments focusing on developmental skills and academic achievement include the Brigance Inventory of Basic Skills, Multilevel Academic Skill Inventory, and Diagnostic Mathematics Inventory (Rusch et al., 1988).

In spite of their many advantages, criterion-referenced assessments can be gravely compromised by biases and values of the individual or group responsible for setting the criteria (Salivia & Ysseldyke, 1988). That is, teachers may fail to construct tests that reflect information sensitive to minorities and students with disabilities. Also, Mehrens and Lehmann (1987) saw several limitations to criterion-referenced assessments, including:

1. detailed specifications and inappropriate content sampling are lacking;
2. may influence teachers to teach primarily to the minimal mastery level;
3. no guarantee that test item prescriptions are used; and
4. students' failure to master an objective is not always clear.

Similarly, Wiggins (1989) suggested that criterion-referenced assessments rehearse students to learn and are inadequate for producing mastery.

Supporters of standardized assessments argue that these instruments were developed by experts and, therefore, are well constructed, and vital for assessing student knowledge and achievement, and that they present valid and reliable data (Feuer, Fulton, & Morrison, 1993). However, others argue that "relying on standardized tests will lead to a weaker, not stronger, educational system" (p. 6); that is, standardized assessments limit curricula, increase student drop-out rates, restrict teachers, and sabotage school improvement (Medina & Neill, 1990). Such assessments are used to measure achievement, ability, or skill and to evaluate students' performances in non-normal, time-limited, or otherwise constrained situations. The result of these tests shape instruction and sample students' behavior for the purpose of making decisions. Despite criticisms regarding their use, criterion-referenced assessments appear to be the preferred method of standardized assessment and a likely solution to the biases otherwise associated with this type of testing.

Alternatives to Standardized Assessment

President Bush (1991) called for nationwide standardized testing as an educational strategy, with strong emphasis on achievement testing. However, this accountability-driven system introduced originally during the Reagan administration has proven unsuccessful (Cline, 1992). Although test scores increased initially, evidence has shown that students were taught to take tests and that a large segment of the curriculum was purposely eliminated (Haney & Madaus, 1989). In reality, therefore, student achievement was not being measured. As a result, researchers in educational assessment have criticized the indirect measure of students' learning and achievement based on comparisons, calling for a new wave in assessment (Gomez et al., 1991). This new wave includes alternative assessments (Alexander & Parsons, 1991).

Worthen (1993), for example, described such measures as "direct assessment," "authentic assessment," "performance assessment," and more generically "alternative assessment." Other researchers use such terms as "dynamic assessment" or "portfolio assessment" (Gomez et al., 1991).

The main focus of these assessment measures is to generate alternatives to traditional standardized assessments and to directly examine student performance on significant tasks that relate to life away from school (Worthen, 1993). Another focus is on empowering teachers to take control of the curriculum, instruction, and assessment process (Gomez et al., 1991). For example, Madaus (1993) claimed that "performance based assessments in the hands of teachers, seamlessly integrated in normal classroom routines, should be more useful to them for formative and diagnostic purposes than traditional, standardized tests have ever been" (p. 11). Finally, alternative assessment aims at eradicating traditional assessment practices that maintain the social and economic repression of minority cultures (Mitchell, 1988).

Although alternative assessments have recently gained major national attention, teachers have been using such measurements for years in the form of "running records"

or "portfolios" (Worthen, 1993). Gomez et al. (1991) studied portfolio assessment in elementary-school classrooms and found they were "unambiguously positive", and that already over-burdened teachers were the key to its success. Using alternative assessment measures is "labor-intensive, time-consuming and makes it difficult to compare, rank and sort students" (Haney & Madaus, 1989, p. 704). However, these assessments can be used to "diagnose the strengths and weaknesses of students and assist them, rather than sort, stratify or segregate them" (Medina & Neill, 1990, p. 35). Wiggins (1989) suggested that a student's pattern of success or failure can be observed in the context of numerous performances. An examination system based largely on performance assessment will "promote the unmotivated, lift all students to 'world class' standards, help increase our nation's productivity, and contribute to the restoration of our global competitiveness" (Madaus, 1993, p. 14). Also, minorities and students with disabilities would benefit from alternative assessment practices, which would render traditional standardized assessment practices obsolete in decision-making and predicting students' post-school activities. This assessment movement requires resources and time (Worthen, 1993) and may exceed the cost of purchasing and implementing standardized assessments (Feuer, et al., 1993). Yet, performance, portfolios, and products may be the predominant measurement mode of choice in the new examination system.

Conclusion

The failure to consider sociocultural milieu, socioeconomic status, as well as linguistic and disability differences in test construction leads to false information about the status of learning and compounds bias in testing (Harry, 1992). Thus, minorities and students with disabilities, in particular, are suffering as a result of traditional assessment practices, which have proven to be inaccurate and inconsistent, yet continue to be used in prediction, decision-making, and inferences about student performance and lifelong success.

Current assessment practices stifle the post-school success of minorities and students with disabilities due to their inappropriate norming standards, discrimination, and exclusion. Thus, evidence suggests that standardized assessments reflect mainly the norms, concepts, language, ability, and skills valued by the dominant American middle-class culture in this country, yet are used heavily to predict the performances of all students, including those from minority cultures and students with disabilities.

By examining individual student skills on specific tasks, alternative assessments appear to be a solution to eradicating biases associated with traditional testing. Finally, educators use a variety of assessment practices to make transition-related decisions for students with disabilities. Yet, specific assessment practices are necessary if students with disabilities are to transition successfully to post-school activities. Minorities and students with disabilities are entitled to assessment practices that appropriately reflect their academic proficiency and competency. Such practices require reasonable and limited use of traditional standardized assessments for the purpose of decision-making, prediction, and inferences about students' post-school activities.

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Culture-Specific Variables that May Affect Employment Outcomes for Mexican-American Youth with Disabilities

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Running Head: CULTURAL VARIABLES

Abstract

The purpose of this paper is to review variables specific to the Mexican-American culture that might influence work-related behavior and outcomes for youths with disabilities from this population. Areas covered from selected literature include parental/family network, cultural view of disability, religious influences, acculturation levels, language issues, education and employment relationships, substance abuse, folk illnesses, and specific cultural concepts such as *machismo, marianismo,* and *familism.* Also reviewed is some of the limited (and possibly inconsistent) research on outcomes in supported and work-related employment for Latino youths with disabilities. These studies appear to show that these youths do as well or as better than their counterparts from other ethnicities.

Culture-Specific Variables that May Affect Employment Outcomes for Mexican-American Youth with Disabilities

For many individuals from this country's indigenous and ethnic minority populations, aspirations related to employment and economic stability have gone unfulfilled or fallen far short of preconceived goals (Kronick, 1992; McKee, 1989; Parrillo, 1991). While there seems to be little disagreement that this state of inequality exists, there appears to be much disagreement on how to allay it (Leung, 1993).

The demographics continue to change rapidly in the United States, and the rate and extent of this change has come as a surprise to most Americans (Leung, 1993). During the decade of the 1980s, half of all immigrants world wide (8.6 million people) settled in the U.S. White males account for a currently declining segment of the overall population, at 37 % of the total. It is estimated that by the year 2,000, 80 to 85% of the work force will be made up of women, minorities, and immigrants (Loden & Rosener, 1991, Price, 1992, Romo, 1984). Minority workers in the 16-24 age group will account for an increasingly larger segment of the future labor force (Escutia, 1986). Indeed, the fastest growing cultural minority age cohort (Escutia, 1986; Schinke, Moncher, Palleja, Zayas, & Schilling, 1988) in the United States is Latino adolescents.

It is commonly estimated that by the turn of the century, Los Angeles will be the largest Spanish-speaking city in the world. (Currently, Mexico City has that distinction.) By 1989, 40 % of all people in Los Angeles were foreign born, 49.9% spoke a language other than English in the home, and of that group 35.5 % spoke Spanish (Miles, 1992). Within certain large geographic areas--especially in the southwest-- the Latino people make up an enormous part of the minimum-wage workforce, yet upward mobility seems to be coming very slowly, if it exists at all. Yet Miles (1992) reminds us that legal and illegal immigrants, refugees, and amnesty recipients are major contributors to an

array of problems associated with adult illiteracy. (There are 27 million illiterate and 20-40 million marginally literate youths and adults in this country.)

Many of these problems directly affect work, such as diminished opportunities to secure work; diminished opportunities for on-the-job training; lowering of pay scale and benefits; slow wage growth; proliferation of the underground economy; expansion of low-wage industries and diminishment of higher-wage industries; homelessness; drains on health, human, and educational services; and diversion of funds (often in communities that can least afford to provide them) from programs used to upgrade human resource capabilities to programs of remedial education, training, and language.

Youth from ethnic minority populations have difficulties equalizing their opportunities in education, employment, housing, social skills, and in the general economy, as do youth with disabilities. Youth from ethnic minority populations who also have a disability face even *more* difficult times. Supported employment is one way to help people with disabilities from all cultural backgrounds equalize their opportunities. Supported employment is the provision of on-going support services for individuals with disabilities who need these services in order to remain employed. The goal of supported employment is competitive employment. Competitive employment is defined as "work that produces valued goods or services at a minimum wage or more, and in a setting that includes nonhandicapped workers and provides opportunities for advancement" (Rusch, 1986, p. 5).

Mainstream American society values work highly. For example, our self-esteem, self-concept, and social/economic status often are job-related. However, in other cultures, this may not be the case. In this paper, we will discuss and evaluate the research that has examined those culturally based variables that may affect successful competitive and supported employment for Latino youth with disabilities as they transition into adult life. Much of this discussion has parallels with Latino youth *without* disabilities who are

experiencing culturally-related problems. Current understanding of Latino cultural factors, such as *familism, machismo,* and *marianismo* also will be presented.

General Issues

Cultural variables that may affect the opportunity for success in supported and competitive employment of Latino youth with disabilities have not been investigated in depth. Thus, only a few studies show and/or review minority-related issues and outcomes in supported employment and youth training programs (Ekstrom, Freeberg, & Rock, 1987; LaLonde & Maynard, 1987; McDonald, 1991; Wilson, O'Reilly, & Rusch, 1991).

Literature relating in general to the topic of transition for culturally-diverse youth is also scarce. Kronick (1992) explained this paucity of information as a simple problem of omission, stating that culturally-based concerns have been left out of the overall evolution of transition as a field of research, in lieu of other matters considered more important or more popular at the time. Numerous authors (Atkins, 1992; Garcia & Pugh, 1992; Kronick, 1992) have called for an emphasis on research in multi-cultural issues in transition, due to the demographic changes that are sweeping the United States, with related projected changes in the workforce by the turn of the century. It is no longer enough to view disability from a medical perspective (Krefting & Groce, 1992) or a vocational one. Other issues, such as cultural concerns, may be equally important and should, therefore, be incorporated into the overall planning scheme for the individual.

Latino Issues That May Influence Transition Outcomes

Language Barriers

Language-related issues and language barriers are an area of real concern for professionals when dealing with Latino families of youth with disabilities. Often, youthful members of the family can speak English, but not the parents and older family members (McDonald, 1991). Kronick (1992) called for more minority counselors, teachers, and professionals (Spanish-speaking in this case) to work with minority clients

and families. Similarly, Kronick (1992) and Trevino (1991) considered it important that professionals who work with minority populations express a willingness to learn their language. According to Kronick (1992), this seems to be especially true in the case of Mexican Americans, who appear to appreciate even a rudimentary attempt by Anglos to learn their language. McDonald (1991) stressed the need for competent and loyal translators to work with professionals.

Latino View of Disability

The amount, extent, and types of illnesses and injuries found among the Latino population are greatly affected by the jobs they generally perform and the associated working conditions (Trevino, 1991). Living conditions, world view, and cultural influences also have a profound influence (Maestas & Erickson, 1992; Trevino, 1991). Thus,"...it is the societal reaction to the disability that is most problematic" (Krefting and Groce, 1992, p. 4).

Perceptions of disability are influenced by aspects that are culturally internal to Latinos, such as the role of men and women and the specifics of the Spanish language and its inherently emotional nature (Cuellar & Arnold, 1988). Cuellar and Arnold (1988), Maestas and Erickson (1992), Trevino (1991), and Leung (1993) found that *curanderismo* (folk illness) plays an important role in the Mexican-American view of disability, as does the role of the *curandero* (the folk healer). Consequently, beliefs in curanderismos such as "ojo" (evil eye), "susto" (magical fright), "empacho" (surfeit), "caida de mollera" (fallen fontanel), and myriad other examples need to be considered and respected when working with Latinos, who may or may not embrace these beliefs (often depending upon the level of acculturation) if some of these individuals are to achieve a true state of wellness and work productivity.

Acculturation Level

The level of acculturation and the acculturation process itself can have a profound influence upon a Mexican-American individual's adjustment, recovery, and

rehabilitation from illness and injury (Cuellar & Arnold, 1988), and, therefore, affect work performance accordingly. Related areas include: length of time the family has been in the U.S., discrimination and prejudice from non-Latino individuals, migrant vs. non-migrant lifestyle, level of stress involved in the acculturation process for the individual and family, level of English language proficiency, family-friends network, family values, as well as personal characteristics, such as self-assurance, interpersonal adequacy, socialization, responsibility, intellectual efficiency, and achievement potential (Cuellar & Arnold, 1988).

Role of Religion

Latino people are predominantly Catholic, and their religion plays a central role in their lives. Maestas and Erickson (1992) pointed out that Catholic parents may be more accepting of children with disabilities than parents who are non-Catholic. Mexicans and Mexican-Americans often view disability as fate, punishment for sins that may have been committed, lack of harmony with the environment, or God's will. Whatever the reason given for a disability, stoic acceptance tends to be the norm (Leung, 1993; Maestas & Erickson, 1992). Leung (1993) suggested that religious aspects have not been given enough consideration in the rehabilitation process of Mexican-Americans.

Education-Employment Linkage

Mexican-Americans comprise the majority of all Latinos in the U.S. (Maestas & Erickson, 1992; Trevino, 1991); yet, they are the least educated (Trevino, 1991). For example, Latinos are the nation's youngest major subpopulation and Mexican-American youths have the highest secondary school dropout rate (Escutia, 1986). Further, Latino dropouts tend to be concentrated in the inner cities where unskilled labor opportunities are declining. Hence, they are seriously at risk socially and economically (Second Chance, 1988).

Lack of transition success for youths from culturally diverse groups may be educationally related. Ekstrom et al. (1987) believe that limited education and poor

reading skills negatively impact outcomes, and called for improved reading capabilities for ethnically-diverse youths involved in supported and youth employment programs in order to maximize success. Kronick (1992) gave evidence via the studies of Duran (1983), Cardoza and Rueda (1986), and Cargile and Woods (1988), that lack of success in, and exposure to the types of classes requisite for university preparedness (e.g., three or more years of natural sciences, social studies, and mathematics, and four years of English) may be a causative factor in lack of transition success for many students from ethnic minorities who may otherwise be appropriate for this level of academic work.

Armstrong (1992), however, placed much of the burden of responsibility on educators, rehabilitationists, and other professionals who have not been properly trained to work effectively with people of diverse cultures, genders, ages, socioeconomic backgrounds, and religions. Armstrong went on to state that changes are taking place in social work, education, and U.S. public health and nursing, but in few other professions. Miles (1992) pointed to the erosion of public support for education of minorities, especially in states such as California, where the numbers of public school seats currently filled by illegal immigrants are increasingly being recognized.
Latino parents place a high value on education for their children, often risking exposure of illegal alien status to enroll them in school (Romo, 1984). Thus, McKee (1989) reported that Mexican American barrio resident parents are extremely concerned that their children receive an education as the main means of equalizing their opportunities for good jobs.

Parental and Family Involvement

It is generally agreed that professionals cannot adequately understand a student's behavior until they understand the family influences on that behavior. However, McDonald (1991) noted that working with parents and families of ethnically diverse clients with disabilities can be problematic because they are often very close knit and distrustful of outsiders and professionals (McDonald, 1991; Price, 1992). Particularly,

under the circumstances of unrelenting economic disparity, many ethnic-minority peoples withdraw inwardly, seeking "solace and security among their own and adopt an increasingly insular view of the world" (Price, 1992, p. 212). As a result, gaining trust is an important factor and usually a lengthy process. Sometimes the families have low expectations for their family member with the disability (McDonald, 1991), and commonly, families are not willing to take risks related to their child.

Yet the close-knit quality of the Hispanic family offers an essential adaptability to its members. Thus, "The family is said to be the most valued institution in Mexican and Mexican-American society" (Maestas and Erickson, 1992, p. 5). Single individuals often find it impossible to survive outside the umbrella of the family because of the way members help and support each other. Resultantly, the family as a unit has more viability. This type of family is not the nuclear unit more common in the white culture, but an extended family that often includes "fringe" relatives such as godparents. Hence, interaction with a large number of family and friends is the norm (Maestas & Erickson, 1992; Trevino, 1991). Schinke et al. (1988) found that the family-friend-community network has been underresearched, underestimated, and underused as an intervention resource. Leung (1993) stated that family processes have not received enough emphasis in the research literature.

The cultural concept of *familism* appears to have the potential to greatly influence Latino youths and their behavior in the world of work, especially in the case of youths with disabilities. Familism places the family ahead of individual interests. For example, children often are expected to contribute to the overall income of the household. As a result of this view, the concept of the family becomes *idealized,* inspiring the greatest sacrifices and also the largest deprivations (Ingoldsby, 1991). Family obligations, value orientations, and influence all affect patterns of Latino labor-force participation and non participation. For example, it is preferable for a Latino woman not to work if she is

married, especially if she has children. This value has caused many Latino women to work from within the home in occupations such as piecework (Parillo, 1991).

Research purports that of all labor-placement methods used by American employers, none has been as pervasive or effective as the informal familial ethnic network, that highly influences employment and occupational choice (Parillo, 1991). The principal response of individual family members to this influence is that they will work harder and longer hours and endure more hardships than many other cultural groups in order to maintain income (Kronick, 1992; Parillo, 1991). According to Maestas and Erickson (1992), this cultural norm has also kept the majority of Latino people with disabilities out of institutions. As a further illustration, these authors gave the example that children with mental retardation are called "enfermitos" *little sick ones.* ("Itos" is a diminutive which relates to love and responsibility.)

Machismo and Other Cultural Concepts

Latino youths, especially males, are a high- risk group for substance abuse (Austin & Gilbert, 1989; Schinke et al., 1988; Trevino, 1991). Reasons may relate to environmental and cultural factors. Austin and Gilbert (1989) noted that Latino youths are exposed to environmental conditions that may predispose them to alcohol-related problems, such as low education, lack of health care, poverty, and a predominantly urban life style. However, they stressed that the relationship between environmental factors and substance abuse for Mexican-Americans is complex and that research results are mixed in terms of what the major issues may be.

Machismo, essentially a male concept, requires overt expressions of masculinity, aggressiveness, physical power, and strength. Consequently, challenges of any type should be dealt with physically, using weapons or fists (Ingoldsby, 1991). Indeed, research has pointed out that to be authentically macho, one must be totally fearless and be capable of drinking huge amounts of alcohol, while still being able to maintain a

sober mien. Austin and Gilbert (1989) stated that family modeling of alcohol use is a factor in the high rates of substance problems among Latino youths.

The concept of machismo is also one of hypersexuality. Less-than-able-bodied men in these two areas (strength and virility) are ridiculed (Ingoldsby, 1991). As a result of these views, women are looked upon as sexual objects to be conquered, and married men are expected to have a mistress in addition to their wife, as well as engage in other brief, but numerous liaisons. Ingoldsby explained that machismo is an outgrowth of a tradition of lack of affection shown to sons by fathers in Latino households and to job insecurity, so often found in Latino households of lower economic status, where machismo is found to higher degree.

Schinke et al. (1988) suggested stressing cultural constructs such as *dignidad* (individual self-worth), *respeto* (a value of rituals and ceremonies to guide interpersonal interactions), *caridad* (a priority of assisting, supporting, and tangibly aiding other Latino people), and developing *confianza* (close, trusting relationships) and *personalismo* (warm, face-to-face interpersonal style) in intervention strategies to help curb substance abuse among Latino youths.

Newton, Elliott, and Meyer (1988) recommended a structured work environment for workers with alcohol-related problems. Areas that may negatively impact work performance for this group are lack of supervision, work stress and job demands, role or job ambiguity and poor definitions of acceptable performance, weather/seasonality of job, and highly mobile or geographically isolated jobs. Indeed, these characteristics of the employment site can facilitate substance abuse. By comparison, characteristics that may first have attracted the employee can deter substance abuse, including company rewards, benefits, and role satisfaction. Given these facts, the question arises whether supported employment (which generally possesses a high degree of structure) and youth employment programs may benefit from even more structure when dealing with Mexican-American youths.

The cultural concept of *Marianismo,* which views women as almost *semi-divine,* and places them on a morally and spiritually higher plane than men, supports both the concepts of machismo and familism. Thus, it speaks to the highly respected mother-image of familism and the need and desire to be protected by a strong, powerful, dominating machismo male. At the same time, however, it contradicts that element of machismo which views women as sex objects (Ingoldsby, 1991).

Current Research Findings on Employment of Latinos with Disabilities

Limitations of Research

The few studies that have attempted to address minority-youth employment concerns may not be accurate representations (Ekstrom et al., 1987; LaLonde & Maynard, 1987; Wilson et al., 1991). For example, the population sample used is often too small. Ekstrom et al. (1987) and Wilson et al. (1991) called for larger sample size, and LaLonde and Maynard (1987) noted also that some studies use non experimental methods, and have suggested that researchers pursue more systematic, methodological analyses that empirically test the validity and reliability of data. LaLonde and Maynard (1987) suggested that pre-training earnings (if any) be incorporated into the research to avoid inaccuracies when looking at issues such as post-training versus pre-training job success. Ekstrom et al. (1987) pointed to an overrepresentation of short-term programs in research studies, suggesting that longer-running programs be studied as well. Further, some studies have been conducted during times of economic recession, making the findings less generalizable to times of economic growth or stability. Often, entire ranges of demonstration models were compared with each other, rather than by type. Ekstrom et al. (1987) recommended that exemplary programs be used when conducting research.

Results

Findings relating to Latino supported employment and youth work programs may need to be viewed with caution, given the evaluation research (Ekstrom et al., 1987; LaLonde & Maynard, 1987; Wilson et al., 1991) suggesting possible study

inconsistencies. Minority clients made higher wages per hour than non minority program participants (Ekstrom et al., 1987; Wilson, O'Reilly, & Rusch, 1991). Latino supported employees made higher per hour wages than all other program participants, including other minorities, and worked more hours per month (Wilson et al., 1991). Further, minority-status employees were younger (Ekstrom et al., 1987; Wilson et al., 1991) and had higher IQs (Wilson et al., 1991).

Employment programs appear to aid minority clients, especially blacks and women (Ekstrom et al., 1987). However, Escutia (1986) and research reviewed in ERIC/CUE Digest, Second Chance, (1988) found that the Job Training Partnership Act's programs achieved mixed results. Generally, they failed to aid Latino clients because the programs have difficulty in attracting youth, are low-cost, short-term, over-restrictive, and suffer from budget cuts, underfunding, and other problems. But, minority-status employees may not need as much pre-employment assistance as whites. Wilson et al. (1991) found that these groups participated far less in pre-employment programs such as developmental training, regular workshop placement, and work adjustment training than whites. Males worked less than females, but were employed for longer periods (Ekstrom et al., 1987). The majority of minority, non minority, and Latino clients in supported employment programs have a diagnosis of mental retardation (Ekstrom et al., 1987; LaLonde & Maynard, 1987; Wilson et al., 1991).

Programs that appear to work well and aid Latino youth include (a) work study programs, (b) youth programs for recent dropouts, (c) immigrant programs, (d) programs for parents, (e) programs for adults with families, (f) government programs, (g) job ladder programs, (h) public works programs, (i) entrepreneurship programs, and (j) job improvement programs (Second Chance, 1988; Kronick, 1992).

Conclusions

It appears that certain Latino cultural variables have the potential to affect employment situations for Latino youths with disabilities. For example, acculturation levels, religious

factors, and language all appear to play major roles. *Familism* requires strict adherence to family rules and obligations from an early age, with the primary emphasis on being a working, contributing member of the extended family unit. This is not always possible for a youth with a disability, making effective supported employment all the more vital in the case of Latino youth with disabilities. However, the strong family and community orientation within the Latino culture is a rich support and intervention network currently untapped by professionals.

The concept of *machismo is* one that a Latino youth with a disability can hardly expect to achieve, with loss or lowering of self-esteem the possible result. The related problem of substance abuse, however, which is part of the machismo "package" may influence Latino youths both with and without disabilities. *Machismo* also appears to relate to family modeling of alcohol abuse for males. The concept of *marianismo,* in which a woman is elevated to superior moral and spiritual status, combined with the machismo need to overprotect her, might result in female youths with disabilities being sheltered to such an extent that achieving the independence so vital for people with disabilities might never occur. This may especially be true given the lengthy dependence of children encouraged in Latino households (Gartner, Lipsky-Kerzner & Turnbull, 1991). The Latino belief in protecting and caring for individuals with disabilities within the home should be given major consideration by professionals dealing with Latino youth with disabilities who may or may not be involved in supported employment programs.

Unfortunately, studies of Latino and minority participation in youth and supported work programs are sparse. The few that exist appear to show that Latino youth with disabilities excel above all others in these programs in all criteria used. Miles (1992) discussed the overwhelming acceptance and trust of non-disabled Latino workers over African-American workers by Anglos in California as an enigma, stating, "Maybe it is the Catholicism...or something in the Latin personality" (p. 54). This finding may also

relate to the Latino cultural norm of familism and a willingness to work harder, longer hours, and at tasks other individuals would not consider doing. However, the resultant downside is that pay scales drop, job competition increases, and unemployment rates go up for unskilled white and African-American workers. Miles (1992) stated further that whites in the United States appear to view Latinos, even those who are foreign, as native and safe and to regard African-Americans who are native, as foreign and unsafe. In summary, he wondered whether Latinos have acquired a better reputation than they deserve and African-Americans a worse reputation than deserved.

However, some evidence suggests that results from work-related studies of minority youths *with* disabilities may not be accurate due to design and control flaws. Clearly, therefore, more studies of these types are needed, using satisfactory controls, before more conclusive inferences can be made. Also needed are studies that look at the role of cultural constructs in employment patterns and outcomes. Because Latinos have higher pregnancy and birth rates than whites or African-Americans, and when this fact is viewed with their high student drop-out pattern, Escutia (1986) believes that they will suffer disproportionate negative consequences if adequate employment training services are not made available to them.

Recommendations

Recommendations for improvement in service delivery for Mexican-American youth, both with and without disabilities, are extensive. They include assessing the client's primary language preference utilizing lay interpreters (Cuellar & Arnold, 1988), and, culturally-appropriate (in Spanish when needed) tests, information, and materials (Cuellar & Arnold, 1988; Kronick, 1992; Trevino, 1991); encouraging parent involvement (Atkins, 1992; Kronick, 1992); showing respect for and knowledge of the Mexican culture (Cuellar & Arnold, 1988; Kronick, 1992; Trevino, 1991); encouraging strong involvement from local minority business and including ethnic minorities on advisory boards (Atkins, 1992); utilization of cultural pride and awareness programming, which Cuellar

and Arnold (1988) term "ethnotherapy"; being aware of the level of acculturation of the particular client and related family (Cuellar & Arnold, 1988; Trevino, 1991); innovatively using existing resources such as churches, cultural and leisure-focused groups like the YMCA (Atkins, 1992); building rapport with clients and their families (Trevino, 1991); including the curandero and folk healing practices (when appropriate) in the overall service plan for Mexican Americans with disabilities (Cuellar & Arnold, 1988; Maestas & Erickson, 1992; Trevino, 1991); learning Spanish even if only to a small degree (Kronick, 1992; Trevino, 1991); improving identification procedures to distinguish those students who need special education services from those who are experiencing culturally based problems (Kronick, 1992); establishing transition tracking procedures (Kronick, 1992); offering flexible hours for appointments; locating service programs in non intimidating buildings accessible by public transportation and offering assistance with transportation problems (Atkins, 1992; Trevino, 1991); taking culturally based sex-role differences into consideration during assessment and treatment (Cuellar & Arnold, 1988); adding anthropological components to practitioner education programs (Armstrong, 1992) and involving anthropologists in disability research and concerns (Krefting & Groce, 1992); developing new service delivery models (Leung, 1993); and researching further the area of transition for Latinos and other cultural minorities.

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Moving out into the World:
Transitions from Adolescence to Adulthood
for Students with Chronic Illness and Other Disabilities

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Running Head: CHRONIC ILLNESS

To appear in: Children with Disabilities and Chronic Illness: Challenges and Solutions in Community Care. Edited by H. M. Wallace, R. F. Biehl, J. C. MacQueen, and J. A. Blackman, Oakland, CA: Third Party Associates, Inc.

Abstract

Recent legislation has resulted in major changes in the delivery of educational and social services to persons with special needs. This paper reviews transition-related legislation, as well as the transition mechanisms and outcomes mandated as a result of this legislation. Two student and family scenarios are used to illustrate the transition process from a social systems perspective.

The year Mary was in my class was the first time she'd been able to attend school for more than two days a week: She was 14. At least twice a year she would miss a month or more, but never long enough to engage homebound instruction. Academic programming for her had been almost impossible. Skill attainment was extremely scattered and there were huge developmental gaps. Her language patterns were immature and she couldn't always make her needs and wants known. Mary's social interaction with peers consisted of insults designed to get their attention, followed by bewildered tears when others eventually sought revenge. Mary consistently tested out in the high normal intelligence range but was performing at primary grade levels. It was all very discouraging.

American youth with special needs have the same aspirations as all other youth. They wish to live, work, and recreate in the community with their friends and family. They want to be part of the American dream. Unfortunately, history suggests that most of them do not find jobs, live independently, or find desired opportunities for recreation.

Over the past two decades, major changes have taken place in the delivery of educational and social services to persons with special needs (Rusch, DeStefano, Chadsey-Rusch, Phelps, & Szymanski, 1992). Thus, the era of specialized and isolated service delivery is over. Further, passage of transition legislation signals a recognition of the lifelong needs of individuals with disabilities and the beginning of an integrated programs model. As a result, many young adults with disabilities are now able to live, work, and play in our towns and cities--just as many of us expected to do when we were growing up. This legislation defines transition from school as:

> a coordinated set of activities for a student, designed within an outcome-oriented process, that promotes movement from school to post-school activities, including postsecondary education, vocational training, integrated employment, continuing and adult education, adult services, independent living, or community participation. (Transition Summary, 1993, p. 2)

In this paper we will examine transition with reference to (a) four legislative acts that impact transition services, (b) seven legislated implementation mechanisms, (c) seven outcome areas, and (d) a social system for evaluating services to transitioning youth.

Transition Legislation

P.L. 94-142. Universal provision of services to students with special needs began in 1975 with P.L. 94-142, the Education of All Handicapped Children Act. As a result of this legislation, every special education child is guaranteed educational services in the *least restrictive environment*, generally determined as the local school district. Further, all special services are documented on an Individual Education Plan (IEP)--an annual program that is designed by parents, school personnel and, when appropriate, the student. Services are guaranteed through rights of due process and parents may challenge decisions or IEP placements.

This act marked a new trend in increased decision-making power for parents and consumers with disabilities. At the same time, the IEP meetings initiated many of the collaborative planning practices that have come to characterize services to individuals with disabilities, including mandated transition services.

IDEA. Taking PL 94-142 a step further, the Individuals with Disabilities Education Act of 1990 (IDEA; P.L. 101-476), addresses the problematic discontinuity of services and eligibility procedures from school-age to adult services. Thus, IDEA mandates post-school planning for special education students to begin no later than age 16, with the plans documented on students' IEPs. This planning must list interagency linkages and responsibilities for each team member, the student and parents, the school, and other service agencies necessary to accomplish the transition outcomes.

This legislation addresses special education students as defined by specific disability categories. For example, orthopedically or other health impaired are two of the categories that include students with chronic illness (Kendall, 1991). However, the broad impacts of chronic health impairments may not fit the required acuteness of any

one definition (Biehl, 1987). Consequently, unless their condition adversely affects their educational progress, children with chronic health impairments are not included.

Section 504. Many of these ineligible children may receive services under Section 504 of the Rehabilitation Act of 1973, however. In accordance with this piece of legislation, students receive personal and assistive technology interventions if they have a physical or mental impairment that limits one or more major life activities (Arizona Department of Education, 1991). Amendments in 1986 and 1992 have increased opportunities for supported employment (community employment with monitoring and support), expanded independent living programs, and streamlined transition from high school to rehabilitation programs.

ADA. The Americans with Disabilities Act (ADA) of 1990 is the most recent major piece of legislation to have expanded transition opportunities for individuals with disabilities by addressing their rights. This bill guarantees access to employment and community facilities and mandates reasonable accommodations except in cases of undue hardship. As a result, whether private or public, all community postsecondary training, employment, and recreation facilities are now available for transition activities.

Through guaranteed access and accommodation, these four pieces of legislation have guaranteed educational, personal, and transition services for special education students with special needs and have expanded transition opportunities. For example, a student like Mary qualifies for special education services because of her significant academic delays. Since she is 14, a transition plan is not required; however, because of her health and attendance problems, her IEP should begin addressing independent living and future career choices as well as remediating her academic and social skill deficits.

In the following section we will examine the mechanisms that are incorporated into IDEA to ensure the critical outcomes stipulated in the transition definition: provision of educational activities, integrated employment, independent living, and community participation.

Transition Mechanisms

As mechanisms for achieving transition outcomes, IDEA mandates seven conditions based upon current educational best practices:

1. transition services are based upon the needs, preferences, and interests of individual students;
2. IEPs will include statements of needed transition services beginning no later than age 16;
3. school and adult services will coordinate efforts to promote movement into postschool activities;
4. coordinated, community-based experiences and instruction will develop employment and adult living skills;
5. outcomes will be individually determined to include postsecondary education, vocational education, vocational training, integrated employment, continuing and adult education, adult services, independent living and community participation, as needed;
6. evaluation of transition services will be based on student adjustment in the postschool and community environments; and
7. the educational agency is responsible for monitoring and assuring delivery of transition services with responsibility to reconvene the meeting and renegotiate any unmet goals.

Such coordinated and collaborative planning is particularly valuable for students with complex needs requiring multiple service specialists. Thus, the interactive process assists these specialists in managing the various systems and disciplines involved (Pacer Center, Inc., 1992), and prepares all team members for periodic acute healthcare needs as well as more chronic needs (Biehl, 1987).

Mary has severe asthma and could benefit from a concerted team effort in managing the impact of this condition on her academic achievement and preparing her for future

changes. Team members would include Mary (at age 16, if not before), her parents, her teacher, the school nurse, an adult service agency (such as the Department of Rehabilitation), her medical specialist or family doctor, and an adult education or community college representative, as appropriate. An important transition outcome will be to introduce Mary to the personnel and agencies she will come in contact with when moving from student or pediatric services to adult-oriented services. It is important to begin the eligibility process as early as possible to avoid any service delays. The IEP team may form the basis for a long-term personal support network as Mary becomes increasingly independent. Mary's school will monitor the transition responsibilities until she graduates and will reconvene the IEP meeting if goals are not met.

While the legislation mandates these best practices to ensure interagency cooperation and collaboration, specific transition outcomes are less well defined. In the next section we look at a series of outcomes that need to be addressed in transition planning.

Transition Outcomes

A number of options have been suggested (Transition Summary, 1993; Wehman, 1992) for addressing the outcomes contained in the transition definition: postsecondary training, integrated employment, independent living, and community participation. For example, the California State Department has divided these outcome areas into seven topics that are listed below along with options within each (California School for the Deaf-Riverside, 1992).

1. Employment: includes work sites ranging from competitive employment (in the community), to supported employment (routinely monitored), and volunteer work;
2. Training and Education: a variety of vocational services and agencies, school work experiences, and postsecondary education programs;
3. Financial/Economic: wages and benefits, income taxes, social services, insurance, and money management skills;

4. Recreational: use of leisure time, sports and fitness, and stress-management activities;
5. Social Relationships: socialization and friendships ranging from work acquaintances to close friends, personal relationship skills, support systems, and requisite communication skills;
6. Independent Living: home management and maintenance, consumer services, community awareness, survival and safety skills, personal management, health services (medical, dental, mental), sexuality and family life, adult rights and responsibilities, and advocacy and legal services; and
7. Residential: includes remaining in the family residence, shared living, independent living, supervised group living (dormitories), and residential care facilities.

Choices among these areas are based on individual student needs and preferences. For example, Mary's Training and Education would address developmental gaps, specific interaction interventions would be listed under Social Relationships, Independent Living would include increased responsibility for health and other decisions, and Employment would identify potential careers and preparatory work experiences.

An annual meeting cannot address all the information, support, and service needs of both students and their families. In the following section we examine solutions generated by using a social systems perspective. A multiple-systems approach will generate more expansive solutions to community barriers by making an environment more responsive and supportive of an individual with unique needs.

Issues and Solutions

Rappaport (1977) introduced a systems-level approach, which was applied to students and workers with disabilities in 1985 (Rusch, Enchelmaier & Kohler, 1993;

Rusch & Mithaug, 1985). The social systems framework consists of four mutually interactive levels:

1. student and family, usually the focus of interventions and programming;
2. program, responsible for implementing the interventions;
3. organization, the agency network that collaborates with the primary program in service delivery; and
4. community, including services and opportunities available including transportation, employment, recreational, and transportation.

We will use this system to identify solutions at every level for Mary and her family and for an additional student, Alan. Only by including all four levels and the unique interactions and contributions of each can we adequately meet the needs presented by these students and their families.

Alan developed recurrent headaches once again, a periodic complaint due to his scoliosis. Just 21 years old, Alan had started a training program as a new client of the Department of Rehabilitation. But he was neglecting to call in to report that he was ill, and he missed a meeting with his rehabilitation counselor. This was a surprise because only two months ago he successfully completed a one-year career and training program in a supervised apartment setting. If it hadn't been for his mother dragging him to the next meeting, he would have been dropped as a rehab client and left without further training or support services.

Student and family level. Mary's family is very supportive of her healthcare needs. Since an aunt also has severe asthma, the family is acquainted with both her routine and her acute needs. In addition, the aunt is a source of emotional support and encouragement for both Mary and her family.

The family has expressed concern about the costs of Mary's healthcare, however. Their income level exempts them from a number of federal programs, yet is insufficient

to cover all costs. Consequently, they are reluctant to seek medical services as often as needed. They hope that someone at the school can help them.

Alan's family is also supportive but finds it difficult to give him advice. Consequently, they have asked for assistance in enabling Alan to make responsible decisions, especially with respect to realistic timelines, employment and financial support. They are willing to support him until he leaves home, if he is willing to contribute.

Alan and his girlfriend wish to get married soon and both families are in agreement. He is having difficulty fitting his dreams into reality, however. For example, he is not concerned about being unemployed and thinks his brother will give him his house when he moves. Further, when making career choices, Alan tends to overestimate his physical endurance, which is limited due to his scoliosis. Alan needs help in a way that will further his growing independence and self-determination.

Program level. Mary's IEP team will develop educational goals to address developmental gaps, social skills training, and increased opportunities for interacting with peers. Although only 14, Mary needs to take an increasing initiative for monitoring her own health, using her medications appropriately, and seeking information from her doctor.

Her school program includes introductory work-exploration activities which give her opportunities to interact with co-workers and supervisors. Specific career, training, and residential options will be addressed as she gets older. The school is not able to provide Mary's family with resources or information about financial assistance. Instead, they plan to contact other agencies that may be able to offer help.

Alan was a special education student because of severe learning disabilities. He is now receiving training through the Department of Rehabilitation and can continue to do so provided he fulfills his obligations with them. If not, he will be left to his own and his family's resources. Although possibly an effective lesson in real-life consequences, it is

not cost effective if Alan remains unemployed, supported by either Welfare or Supplemental Security Income. Once without work, unemployment rates for individuals with disabilities increase (Mithaug, Martin, Agran, & Rusch, 1988). As a result, Alan's compliance with his rehabilitation program is becoming a critical life decision that must be addressed at other levels.

Organization level. Mary's IEP team members are pursuing information about financial support available through other agencies. Also, her medical specialist may know of a parents' group that could assist Mary's family in identifying financial resources in the community as well as addressing other issues as Mary moves into adulthood. Further, a patient support group puts Mary in touch other peers, thereby improving her social skills in addition to offering opportunities for sharing some of her frustrations.

Mary's team wants to know specifics about Mary's prognosis, symptoms they should be aware of, and possible interventions to reduce Mary's absenteeism. Such information will influence career decisions, including the "health" of potential work environments and the physical demands of the job. Mary's parents have agreed to ask the aunt to meet with the team as she is a potentially useful resource in guiding future decisions.

Alan's rehabilitation counselor has invited members from the previous IEP team to assist Alan and his family with timelines and decision-making strategies. At some point, the team may wish to do joint planning with Alan's girlfriend, who is also a rehabilitation client, to help the couple develop realistic goals and plans.

There is some concern about Alan's headaches. For example, if they are indicative of a deterioration in his overall health, they may impact his need for future career and support services. On the other hand, the headaches may be symptomatic of Alan's anxiety over his new adult status and independence. In this case, he needs constructive reassurance; for example, a mutually developed sequential plan that is periodically reviewed may provide a sense of structure without compromising Alan's sense of self-

direction. Further, Alan's medical specialist may know of a support group that could help him learn about, and cope with, his physical limitations and make realistic, yet optimistic life choices.

Community level. The financial dilemmas facing Mary's family are not unique; healthcare for families in this country generally depends on the parents' employment. Assistance programs frequently set low income-level criteria. However, Mary's healthcare costs are higher than average and, along with her current absenteeism, could present significant barriers to employment. Thus, without changes in current policy, Mary may not be able to get the insurance, or the job she needs, to be able to pay for her healthcare. Financing healthcare for individuals with disabilities is an issue that must be resolved at the policy and legislative level. To do so requires information and action by consumers, their families, and their advocates.

Although Alan was fortunate to have participated in a supervised apartment- living and career program, he would benefit from additional training and opportunities in a program of gradually decreasing supervision and support. The school has considered opening a second-year program off campus, but needs interagency and state-level help to secure the facility, train and certify the staff, and write the grant. The school has made initial state-level contacts but is currently caught up in a districtwide program review and, therefore, has not had time to pursue this issue.

Unlike many individuals with disabilities, Alan is eligible for rehabilitation services. Since, funding is allocated locally, resulting services vary with locale. Further, counselors are evaluated based on numbers of clients placed in employment. Although this may be an efficient and effective way to retrain returning veterans, it is not an effective way to deal with the diverse needs of individuals with disabilities now guaranteed access to employment and community participation. Individuals who are determined to be ineligible or who lose their eligibility have no other service agency to

turn to. Without training options and assistance in finding employment, their only option is to seek public assistance -- a burden for taxpayers that only worsens over time.

Individuals at all levels of the social system need to provide local-, regional-, and federal-level decisionmakers with specific information about problems as well as suggestions for change. The legislation guaranteeing access is having ever-broadening effects; at the same time, however, it is making more apparent the tremendous gaps and the lack of a unified and consistent service delivery system, particularly after adulthood.

Conclusion

This paper has examined various issues related to transition, all of them pointing to the need for service professionals and the entire community to work together to ensure full participation and independent living for young adults with disabilities. Team members will increasingly be asked to function as facilitators or knowledgeable advocates, rather than "experts," in helping individuals with disabilities make decisions for themselves and supporting them in these decisions. In many instances, we will need to identify solutions that extend beyond our own professional or programmatic resources and involve all four levels of the social system. Only if we work together will the time come when individuals with disabilities are truly empowered to lead their own lives in a community that is increasingly accepting and supportive.

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Job Matching in Supported Employment: Variables Related to Transitional Planning for Students with Moderate and Severe Disabilities

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Running Head: JOB MATCHING

Abstract

Supported employment is one link of the transitional chain that can augment the quality of life for individuals with moderate and severe disabilities. Within supported employment training programs, job matching has been identified as a key component. This paper explores variables related to job matching through a comprehensive, though not exhaustive, review of the supported employment literature. This review supports a argument for emphasizing job matching as part of the placement process. Future directions for the use of these variables are suggested.

Job Matching in Supported Employment: Variables Related to Transitional Planning for Students with Moderate and Severe Disabilities

"How do special education students fare after they leave school?" (Edgar, 1985 p. 470) This question is germane to the goals of PL 94-142 which guarantees a free and appropriate public education for individuals with disabilities so that many may become productive members of the community. Unfortunately, the question Edgar (1985) posed prompts some disconcerting answers. For example, the U.S. Commission on Civil Rights (1983) reported that unemployment rates among individuals with disabilities are much higher than for persons without disabilities. Further, the Commission also reported that approximately 50% to 75% of adult workers with disabilities are unemployed. This is disturbing news considering that the latest figures show that 200,000-250,000 students with disabilities leave publicly supported education programs each year (U.S. Department of Education, 1989, 1990). Among individuals who received special education services, those with mental retardation appear to have the greatest difficulty attaining post-secondary employment, due in part to their disability being more obvious to the employer (Keystone Area Education, 1983). According to Rusch and Hughes (1989), individuals with mental retardation have traditionally been considered unemployable.

As children with disabilities grow into adolescents, then adults, their disabilities do not disappear. Educators recognize that the years between adolescence and adulthood are a time of transition. The purpose of this paper is to discuss one aspect of the transitional linkage between school and work that can augment the quality of life for individuals with moderate and severe disabilities: supported employment. The discussion of supported employment will begin with an overview of the literature. The focus will then switch to job matching, which is one aspect of supported employment training programs within public school settings, with an emphasis on related variables that should serve as a foundation for future transitional planning.

Two categories of job matching variables will be discussed: active and implied. Active variables are supported in the literature as either being research-based or non-research based. Research-based variables are those components of job matching that are supported empirically in the literature. Non-research based variables, in turn, are components that are discussed in the literature through model programs, position and issue papers, and conceptual/theory articles. On the other hand, implied variables are components of job matching that are not specifically mentioned in the literature, but are implied through discussions of other critical elements of supported employment. Lastly, future directions for the use of these variables within supported employment training programs will be suggested.

Overview of Supported Employment

Supported employment is much more than a job, however. In many ways, it personifies a national civil rights movement on the part of people with severe disabilities who have been excluded, devalued, and disenfranchised on the basis of their perceived lack of vocational competence...supported employment represents serious social change. (Wehman, 1988, p. 357)

This account reflects a progressive attitude towards persons with moderate and severe disabilities that is beginning to be espoused in the literature (Cole, 1987; Culver, Spencer, & Gliner, 1990; Rochlin, 1985; Rusch & Hughes, 1989; Steere, Wood, Panscofar, & Butterworth, 1990). Rusch and Hughes (1989) argued that recently, supported employment has proffered individuals with moderate and severe disabilities new vocational opportunities, by facilitating successful participation in integrated settings. Hence, it has provided an alternative to the sheltered workshop.

The traditional sheltered workshop is a restrictive environment that is usually selected for adults whose severe learning and/or behavioral disabilities preclude them from placement in a less restrictive setting (Masters & Mori, 1986). The sheltered workshop has often been the option for individuals who cannot be placed on regular job sites after

graduation (Patton, Beirne-Smith & Payne, 1990). Although it provides skill development and other work adjustment training, Patton et al. (1990) raised several concerns regarding the sheltered environment as an employment option, including issues of segregation, human dignity, and low wages. Similarly, Brown, Nietupski, and Hamre-Nietupski (1976) recognized that if students with severe disabilities are to integrate successfully into society (i.e., live in the community as adults), they need to interact with peers without disabilities. However,human dignity and self-worth are not enhanced through participation in a segregated setting particularly settings fraught with meaningless activities for little or no pay (Patton et al., 1990). Similarly, Hasazi and Clark (1988) reported that despite genuine efforts of schools to educate adolescents with mental retardation in becoming productive members of the community, many students continue to have limited opportunities to acquire the skills necessary for postsecondary employment and, therefore, are unemployed following graduation. Through transitional planning, a planned process for the implementation of employment upon graduation, supported employment can provide these much-needed opportunities (Wehman, Kregel, & Barcus, 1985).

Bellamy, Rhodes, Mank, and Albin (1988) outlined three major components of supported employment: (a) paid employment, (b) ongoing support, and (c) integration, which together provide the conceptual underpinning of supported employment. Discussing the need to re-evaluate present services for persons with disabilities to ensure that meaningful integrated employment opportunities are provided. Shafer, Wehman, Kregel, and West (1990) recommended the following elements be stressed in service delivery systems: (a) pay for real work, (b) long-term support that facilitates job retention, (c) placements for individuals with severe disabilities, (d) integration among co-workers without disabilities, and (e) interagency cooperation and funding.

An important aspect of these elements is the provision of supported competitive employment within these delivery systems. Thus, Shafer, Hill, Seyfarth, and Wehman (1987) recognized competitive employment as an enhancement of supported employment.

Specifically, competitive employment programs actively participate in screening and selecting jobs that match client characteristics. In addition, placement and training are provided at the work-site by employment specialists (Shafer et al., 1987). Therefore, on-site training and follow-along services can facilitate long-term employment for individuals with minimal skills.

Steere et al. (1990) added to the literature by addressing an issue that underpins the theoretical base of supported/competitive employment: quality-of-life outcomes. Steere et al. (1990) saw employment as the vehicle for attaining quality-of-life outcomes. As such, employment is a goal, not a final objective. Rather, employment opens the door for acquisition of such benefits as self-esteem, wages, friendships, and self-direction (Steere et al., 1990). However, in order to facilitate quality of life, employment must be a positive experience. Therefore, job matching, as a key feature to competitive employment (Shafer et al., 1987) is subsequently a key feature to quality of life outcomes.

Job Matching

Within the parameters of a supported work approach to competitive employment, job matching refers to the process of assessment (Wehman & Kregel, 1985). Assessment involves evaluating an individual's abilities as they relate to a specific job task. That is, the strengths and weaknesses of an individual's repertoire are taken into consideration prior to job placement. However, it is necessary to evaluate a wide array of specific jobs in order to make proper options available to the student. Assessment of specific job tasks allows the employment specialist to compare student information with job requirements. Based on an analysis of job, the best fit may be identified.

In the next two sections, many of the variables involved in the job-matching process will be discussed within the context of how they were supported in the literature. For this purpose variables were classified as either active or implied.

Active Variables

Variables germane to the job-matching process were supported in the literature as either research-based or non-researched based. Both types will be discussed in this section.

Research-based: An emergent body of empirical literature is devoted to the study of supported employment. This literature, which includes empirical components related specifically to job matching, offered insight into which variables would have the most influence upon successful outcomes.

In an eight-year longitudinal study focusing on supported competitive employment, Wehman, Hill, Wood, and Parent (1987) described the experiences of 21 persons with severe mental retardation. One of the major recommendations of this study was that a more extensive job analysis be conducted prior to placement. This conclusion was based on descriptive data consisting of supervisor evaluations (i.e., worker strengths and weaknesses), job task, hours of on-site staff intervention, and job retention. Job retention ranged from a little more than one week to over seven years, with a mean of two and half years.

Overall, the placements were reported as being successful. However, Wehman et al. (1987) noticed that the reasons for separation were incongruous with the positive supervisor evaluations, leading to a theory of a halo effect. That is, an absence of negative comments may be due to the employee's disability.

Wehman et al. (1987) further speculated that deteriorating work performance may be due to a reduction of on-site staff follow-up hours, even after the employee appears to be doing well. However, Wehman et al. (1987) noted, that the supported employee's weaknesses or obstacle to a good job match were not always the reason for termination. For example, though one of the subjects lacked adequate social skills, the reason for termination was given as a seasonal change at the work site (i.e., change in the amount of work available). Empirically, this study was unable to single out variables for success, or lack thereof. However, based on the inconsistencies of the evaluations versus the reasons

given for job separations, it was concluded that a more detailed job analysis would enable a better fit of student characteristics to job characteristics.

Salzberg, Agran, and Lignugaris-Kraft (1986) addressed the question of social behaviors that affect successful employment outcomes. A questionnaire relating to the importance and frequency of 27 work-related social behaviors was completed by 30 supervisors randomly selected within three cities in Utah. The supervisors were in charge of services that have been recognized as obtainable for persons with mental retardation, including janitors, motel maids, dishwashers, food service workers, and kitchen helpers. Statistical analyses were used to determine the mean importance and mean frequency ratings by and across job types. By examination of the data, the authors found that the perceived importance of specific social behaviors was related directly to their association with productivity. That is, the social behaviors that related to productivity were rated significantly higher than those that were not. For example, arriving on time, asking for assistance, following directions, and responding to job emergencies were related to work performance and, thus, were rated high. In contrast, arguing, using objectionable language, and using social amenities (i.e., appropriate salutations and saying "please" and thank you") were not related to productivity and, thus, received lower ratings. Therefore, individual characteristics that might interfere with performance will influence supervisors' perceptions of the social behavior.

Thus, assessment of specific social skills is supported in this research. Further, it would be useful if job analyses included a frequency estimate regarding the number of social interactions that may occur on the job, and those related to production.

In a study that corroborates Salzberg et al.'s (1986) conclusions, Heal, Gonzalez, Rusch, Copher, & DeStefano (1990) compared successful and unsuccessful placements of 54 matched-pairs of high school students and young adults with mental retardation. The matched pairs design involved having job coaches or project supervisors respond to surveys that paired a successful placement with an unsuccessful placement. Using two-

tailed statistical measures to analyze the data, Heal et al. (1990) identified indicate those variables that appeared to influence successful placements the most. Specific factors included individual ability, quality and production, social skills, and support. Also, support was reported as a common variable throughout the successful placements, including follow-up, placement specialist, and employer/supervisor support.

No single variable was responsible for successful or unsuccessful experiences. This finding supports a conclusion of the study that a sensitive job match may have contributed to the success of a placement. Therefore, factors in this study that were found to influence, may be important variables to look at when matching worker to job. As Heal et al. (1990) stated, "...actual placements based on a good job match and managed by well-trained staff may facilitate successful transition into competitive work..." (p. 194).

Hudson, Schwartz, Sealander, Campbell, and Hensel (1988) conducted a statewide survey of 50 adults with disabilities who were employed. The interview instrument consisted of educational, employment and personal components. The age range of respondents was 19-25 years old. Twenty of the participants had mild to moderate mental retardation, while the remainder were diagnosed as either learning disabled, multiply disabled, emotionally disabled, visually impaired, physically impaired, or hearing impaired.

The purpose of the study was to investigate factors that might have influenced successful employment. Within the educational domain, 94% of the subjects considered their high school experiences useful to their current employment. This finding has practical implications for specialists placing high school students on the job by showing that if students are to achieve postsecondary success their work experience during high school must be positive and gainful. Although no specific variables related to high school experience were discussed, it is important to note that 82% of the respondents attributed social skills preparation to their success, and only 48% attributed job training. Thus, based

on the results of this study, social skills or the lack of asocial behaviors, and a positive high school experience were key ingredients to long-term success.

Results of a study by Culver et al. (1990) supported the argument that employee assessment is important to job placement. The study suggested specific assessment procedures that would help detect an employee's skills and interests. Forty-seven job developers responded to a survey related to specific job development activities for the purpose of determining the combination that best predicted job placements. Job placement was defined as the number of employers who hired clients as a result of the job developer's activities.

Out of 18 independent variables, which included demographic and job development activities, only five were identified as having contributed to the prediction of job placements. One of these was client assessment. Culver et al. (1990) reported that the relationship between job placement and the use of client assessment demonstrates the importance of developing jobs that match the client's skills and interests. The specific areas of assessment included medical and psychological reports, parental concerns, client interview, and observation of client behavior across community settings. Areas of assessment found to be inadequate were standardized tests, interest inventories, and evaluation through simulated job tasks.

In view of the empirical research, it appears that client assessment, job analyses, and ongoing support are recurrent themes. More specifically, within client assessment, social skills evaluation seemed to be a priority. though supported in the literature as an important aspect to job matching, job analyses, were not explored fully. That is, specific elements of the job analyses were not discussed in this body of research. Lastly, ongoing support was shown to be an influential factor in employer satisfaction and job retention.

Non-research: The majority of discussions of supported employment fall in the non-research classification, which has been designated to any literature that is nonempirical.

This vast body of literature contains a wealth of practical knowledge, suggestions, and insight that may lead to empirical foundations.

Job analysis, which was empirically supported though not fully explored, is a common variable among the non-research literature, where it is subsumed under job placement. Goodall, Wehman, and Cleveland (1983) identified three phases to job placement: job development, client assessment, and placement.

Within the job development phase, Goodall et al. (1983) elaborated on job analysis. Specifically, the specialist should assess the characteristics of the job duties at the work site. Such duties should be within the parameters of what a person with mental retardation is able to perform. This requirement coincides with being able to recognize jobs that can be tailored at the work site to best fit the client. That is, if several work options are available, the specialist should select, or possibly create, the job that demonstrates the best match (J. Nietupksi, personal communication, May, 2, 1991). In addition, Goodall et al. (1983) suggested the specialist acquire the following information: (a) general knowledge about the position (e.g., work schedule, pay rate, benefits), (b) a detailed description of the task as told by the employer and co-workers, and (c) specific job requirements that might otherwise be taken for granted (e.g., amount of public contact, physical stamina needed to perform task, amount of reading and writing involved, volume of work, availability of supervision, etc.). The authors stressed that a job match is accomplished when, "...a job seems appropriate for a particular client (i.e., skills and abilities of the client match the specific requirements of a job)" (1983, p. 272). It appears then, that in order to complete a job match, a comprehensive job analysis is required.

Alper (1981) offered additional insight into job analyses, stressing that certain conditions in the work environment may warrant specific attention, including noise levels and presence of workers. These circumstances may be unyielding, in which case the supported employee may have to learn to tolerate the existing conditions. Alper (1981) also

emphasized the need to evaluate related skills that may be required as part of the overall job experience (e.g., telling time, asking for assistance, and mobility skills).

As part of job analyses, the literature (Alper, 1981; Gemmel & Peterson, 1989; Goodall et al., 1983; Rusch & Hughes, 1989; Wehman & Kregel, 1985) provides support for the use of a community analysis. A community analysis involves determining which jobs in the community meet the goals for supported employment (cf. Alper, 1981; Rusch & Hughes, 1989; Wehman & Kregel, 1985). Typically, community surveys consist of phone calls, correspondence, and personal contacts (Rusch & Hughes, 1989). Once specific businesses have been targeted, a comprehensive analysis of each follows. The more available jobs, the more opportunities for a good match.

Rusch and Hughes (1989) proposed that after a prospective employer has been contacted, the job site should be observed to determine the necessary vocational and social skills. Conversely, if vocational and social skills are analyzed at the work site, they should also be part of the client assessment. Alper (1981) suggested in addition to vocational and social skills assessment, that other behaviors need to be evaluated, including interfering or excessive behaviors, motor problems, communication skills, and self-help deficits. Another important aspect of client assessment, as suggested from the literature, is assessment of the client's interests (Alper, 1981; DiLeo & McDonald, 1991; Goodall et al., 1983; McDonnel, Hardman, & Hightower, 1989; Wehman & Kregel, 1985). Thus, the student should be informed of the different jobs that are potential work sites.

Lastly, in reviewing other evaluations that may be subsumed under client assessment, the literature suggests looking at the student/client's official records. Such records include: (a) educational/academic, (b) psychological, and (c) medical files (Alper, 1981; Gemmel & Peterson, 1989; Goodall et al., 1983). Analyzing records may be beneficial in assessing present levels of performance, strengths/limitations, and any specific conditions unique to the individual. For example, medical records might indicate a respiratory ailment, which may preclude the client from working in a dust-filled environment.

To summarize the non-empirical literature, the most common major variables were job analyses, client assessment, and job placement. By analyzing a client's skills and comparing them with requirements of the job, an appropriate match may be facilitated (Wehman & Kregel, 1985). An emerging technology has attempted to incorporate computer software in the process of job matching. For example, the Client-Job Compatibility Match Program created by the Virginia Commonwealth University-Rehabilitation Research and Training Center is a high-tech facilitator in determining best fit matches. However, the literature on the efficacy of such programs remains scarce.

Implied Variables

Implied variables refer to factors that have been suggested in the literature as being related to successful employment outcomes. Such variables are subsumed under this category, because they represent a nondirect reference to the process of job matching. Though job-matching components are discussed in much of the supported employment literature, certain elements with implications for job matching are found in broad discussions of job placement and job development. These discussions are worth mentioning.

Several articles (Gemmel & Peterson, 1989; Steere et al., 1990; Wehman, 1988; Wehman & Kregel, 1985) considered transportation an important variable in the job placement process. Though transportation per se is not part of the direct client assessment and job analyses compatibility match, it nonetheless must be considered when matching clients to a job. Thus, arrangements for transportation and location accessibility are points to consider, as they might be barriers to employment. For example, Steere et al. (1990) identified transportation as a potential challenge that specialists should address. Similarly, Wehman (1988) stressed that lack of transportation either precludes the employment option, or greatly hinders efforts to secure appropriate jobs, by creating lengthy time delays.

Another implied variable related to job matching is on-going support. This variable is innate to *supported* employment,and has been studied empirically (cf. Heal et al., 1990;

Shafer et al., 1987). Ongoing support and follow-up services have been placed in the category of implied variables because the literature has not directly referenced support services with procedures linked to job matching. However, the literature does acknowledge that support services are crucial to job satisfaction and retention (Bellamy et al. 1988; Culver et al. 1990; Goodall et al, 1983; Hasazi et al. 1988; Wehman & Kregel, 1985; Wehman et al., 1987). Thus, several of these aspects (e.g., vocational performance, productivity, social behavior/work compliance) are directly related to an assessment of the worker's current skills. The implication then is that specialists in charge of matching clients to jobs should be aware of the availability of support services. If available, such services may enhance skills that may be otherwise lacking. Even so, the following questions should be addressed: what form will it take? and can support services augment the possibility of a successful job match?

Other implied variables found in the literature relate to job satisfaction, which is a targeted outcome of supported employment. Several factors relating to job satisfaction were recognized by Moseley (1988), including autonomy (i.e., control over one's task), integration with co-workers as part of a work team, higher pay, and performance of job tasks that are complex enough to hold the client's interests. When weighing options for the best placement, these variables are worth analyzing.

Based on the literature, several variables bear significance to the process of job matching, including transportation, support services, and factors that promote job satisfaction.

Implications

In the quest for jobs through the process of job matching, one should not be blinded by the notion that there must always be a *perfect* match. For example, Wehman and Kregel (1985) suggested that the client's inability to perform specific skills should not preclude the client from placement. In their words, "failure to incorporate persons with moderate and severe handicaps into the labor force wastes a valuable human resource" (p. 3). Thus, the

placement of individuals with disabilities into to the work place ought to override ardent concerns of attaining a perfect match. This concern, coupled with issues of quality of life and normalization, should be further enhanced to afford the individual the most positive work experience.

Discussion

This paper attempted to present an overview of the many variables that can be associated with job matching, including active and implied. Active variables were either investigated in the empirical research or suggested in the non-research-based literature. Implied variables, on the other hand, were referenced in the supported employment literature as being important to outcomes, though not unique to the process of job matching.

From the research-based literature, several investigative outcomes are worth mentioning. For example, it was found that worker productivity and specific social skills (i.e., following directions, and providing assistance to co-workers) were perceived as key ingredients to job success (defined as employer satisfaction and job retention). Ongoing support was another empirical factor that influenced the employer's perception of satisfaction. Lastly, job analysis and client assessment were demonstrated as being important for job matching. However, the specific components of these two variables were not detailed in the studies. Therefore, it is not known which aspects of these variables are the most or least effective.

The non-researched-based literature offered many suggestions for what a job analyses or client assessment might entail. Specifically, within a job analysis, the first step consists of conducting a community analysis of potential job sites. This involves locating cooperative employers and possibly re-educating reluctant employers about the value of individuals with disabilities (Goodall et al., 1983). After sites have been selected, a job analysis is conducted that might include (a) inventory of job task(s), (b) related tasks performed at work, and (c) ecological assessment of work environment. To conduct a client assessment,

the literature suggested the following components (a) evaluating vocational and social skills, (b) recording student's interests and preferences, and (c) reviewing academic, psychological and medical records. Other job-matching suggestions included tailoring a job to best fit the client and employing computer software to calculate the best match.

Variables suggested in the literature as being unique to job placement often had strong implications for job matching. Hence they were designated as implied. The most common of these variables included transportation, ongoing support, and factors related to job satisfaction. Transportation is a primary consideration, because without it, even the "perfect" job will not work out. If available, ongoing support may provide the ancillary backing needed for success. Some of the factors associated with job satisfaction were employee autonomy and complexity of task completion. Knowledge of job satisfaction variables might be useful when evaluating client aptitude. A specialist may want to include these variables in the wider scope of the analyses to ensure that all factors have been considered prior to placement. Though the implied variables do not directly relate to the compatibility analysis (i.e., match of client skill to job requirement), they should relate to job/client considerations, which constitutes an integral part of the matching process.

The literature reviewed in this paper presents a strong argument for job matching as part of the placement process. Recurrent themes in the supported employment literature are the promotion of normalization and quality of life through competitive employment. These themes can be enhanced through comprehensive job-matching procedures also discussed in the literature. The literature offers much insight into the way supported employment can be implemented for success. However, job matching and placement are too individualized to offer any guarantees. It is suggested that a larger empirical base is needed to expand our understanding of what makes a *good match*. It is hoped that the confluence of variables presented here can help shape future trends in the area of supported employment, particularly that of job matching.

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